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BASE, PAYLOAD AND CONNECTING STRUCTURE AND
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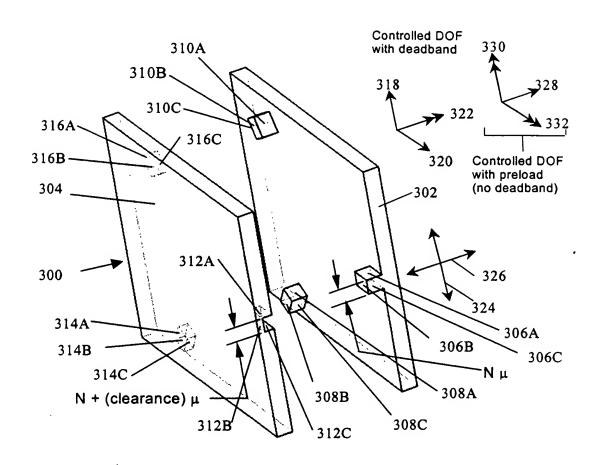


FIGURE 3



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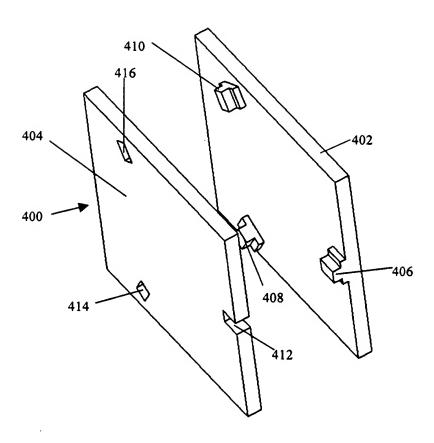


FIGURE 4



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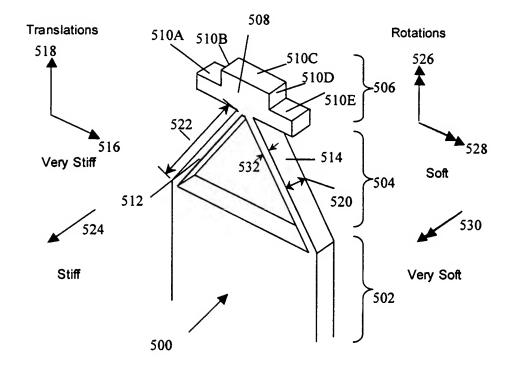


FIGURE 5

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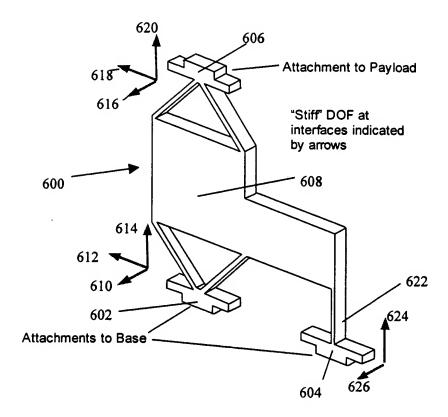


FIGURE 6



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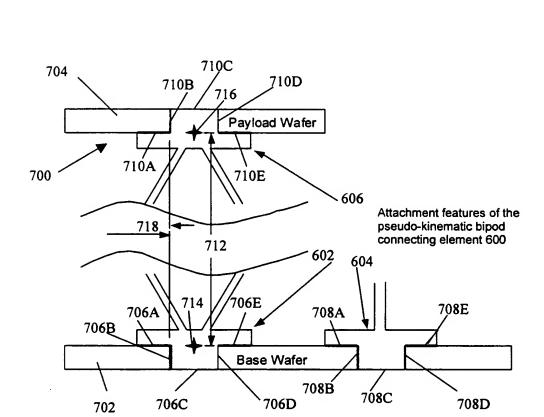


FIGURE 7



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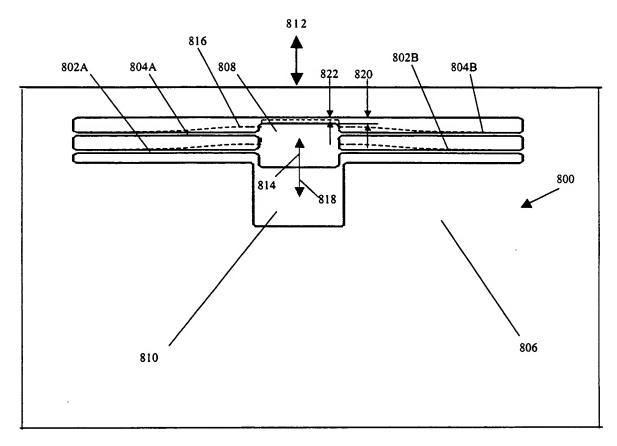


FIGURE 8



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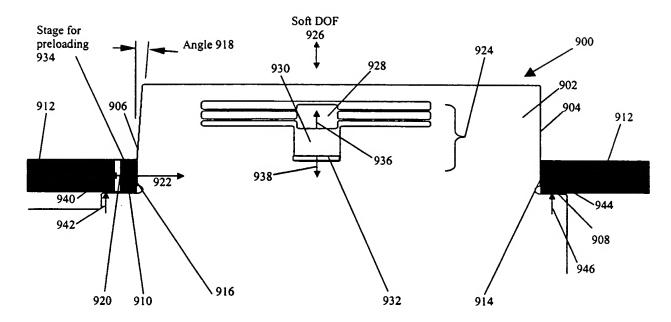


FIGURE 9



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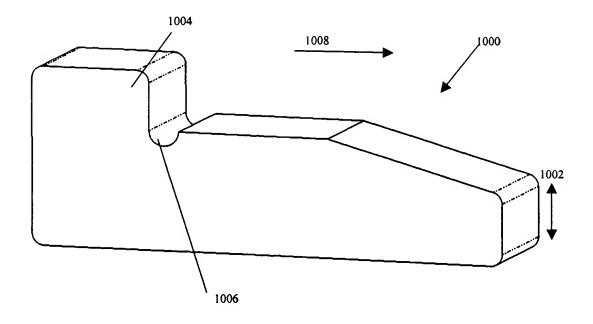


FIGURE 10



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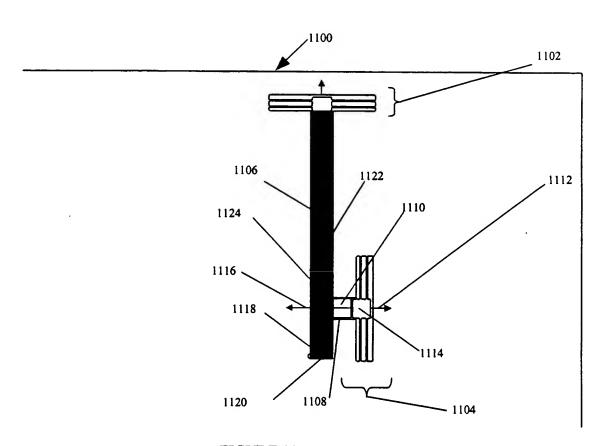


FIGURE 11



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## FIGURE 12A

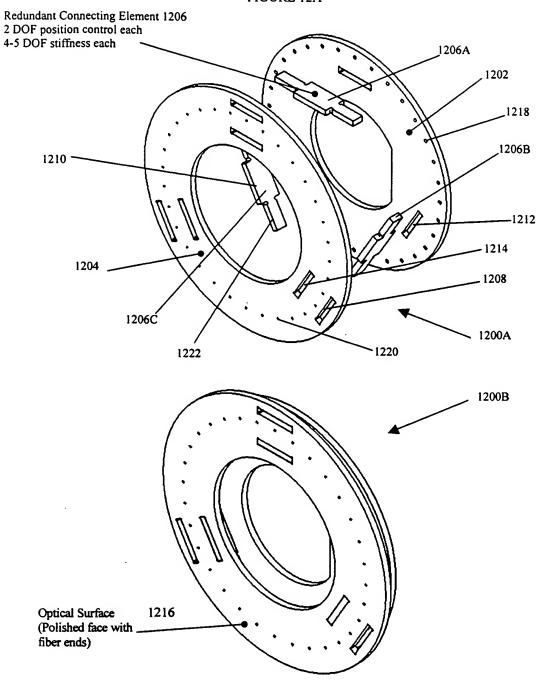
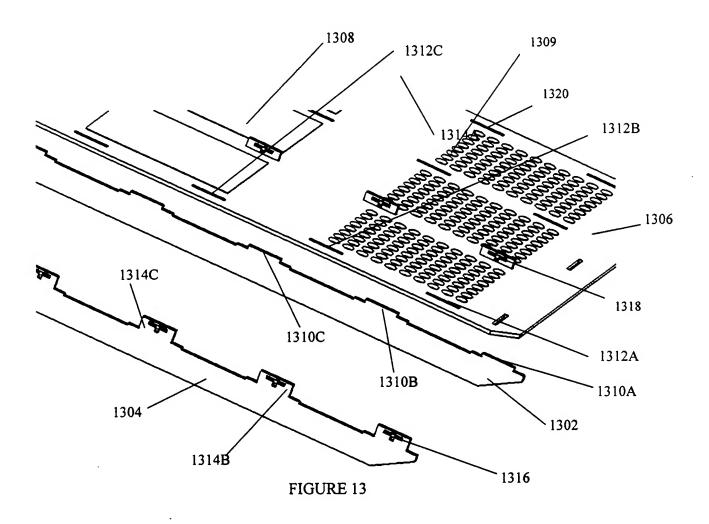


FIGURE 12B



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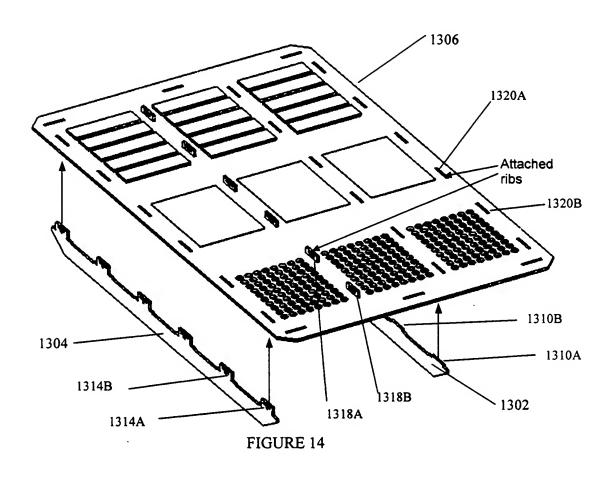
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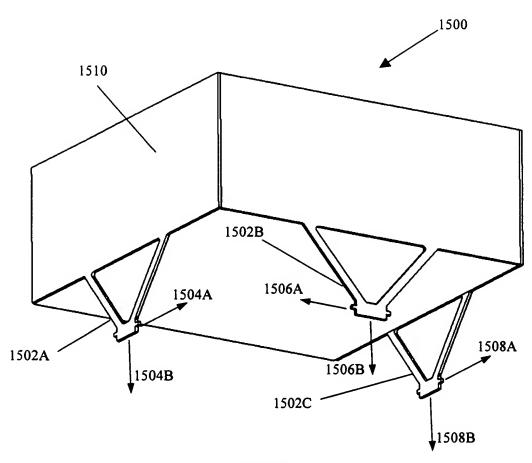
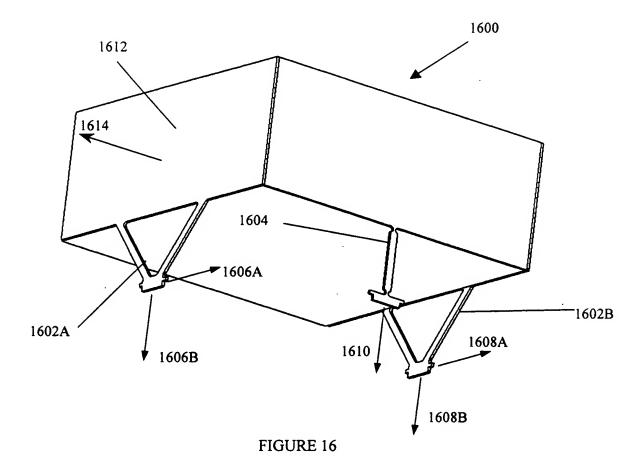


FIGURE 15



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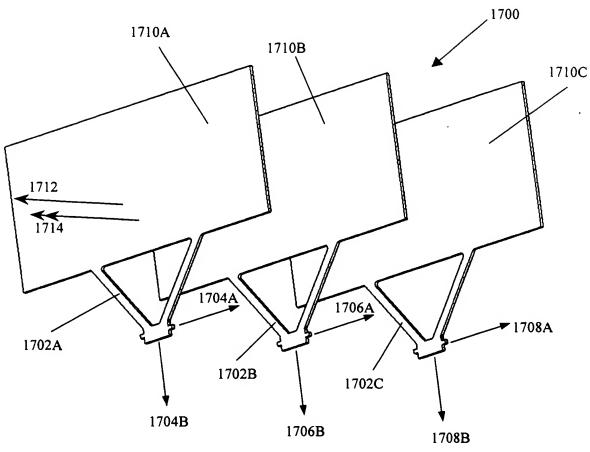


FIGURE 17



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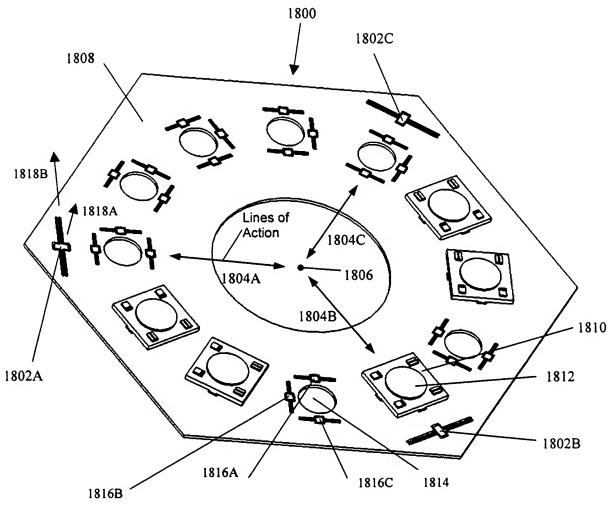


FIGURE 18



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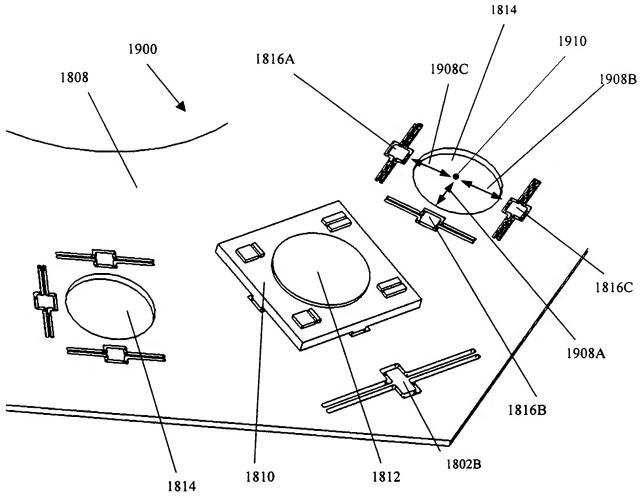


FIGURE 19



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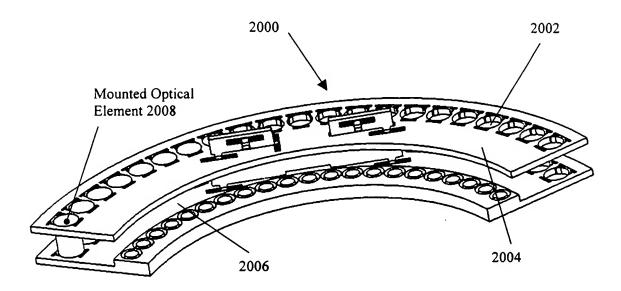


FIGURE 20



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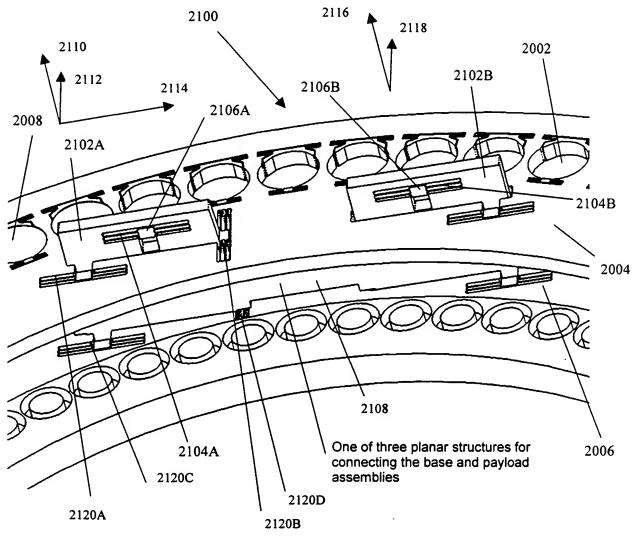
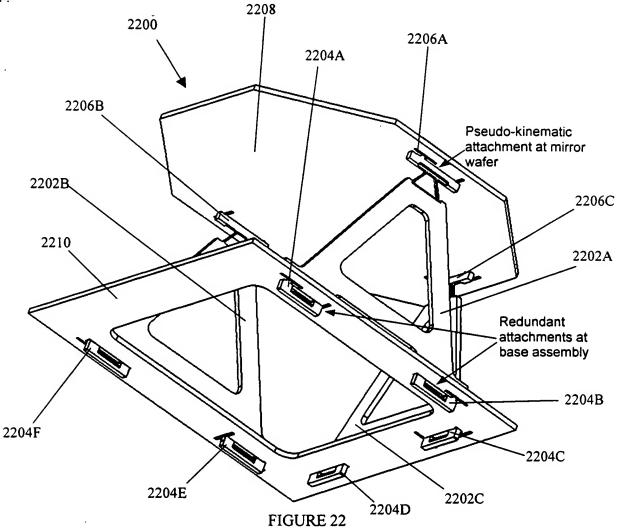


FIGURE 21

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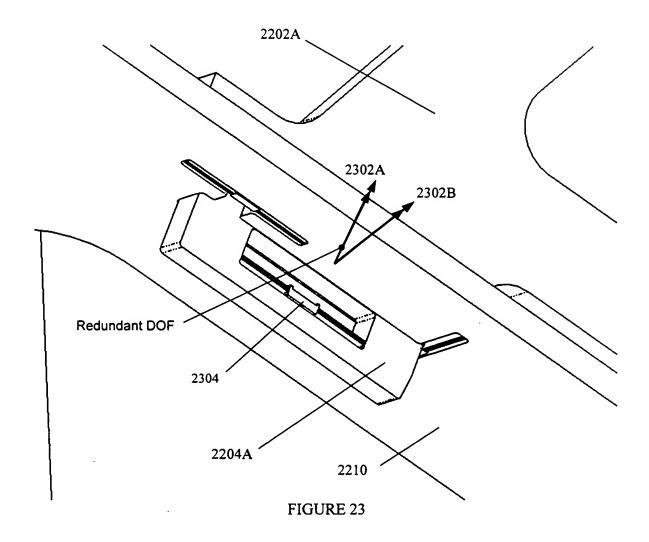
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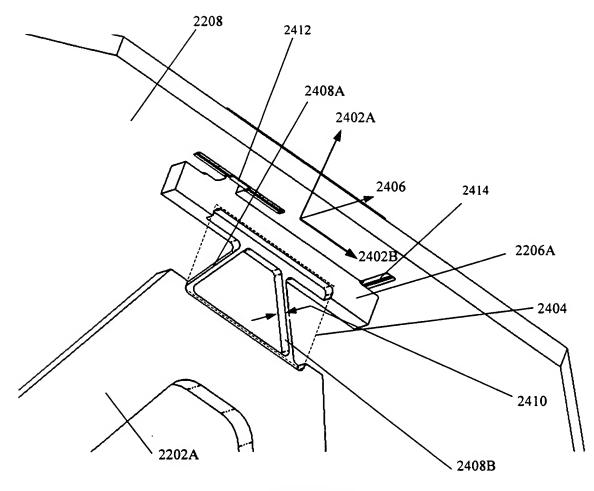


FIGURE 24



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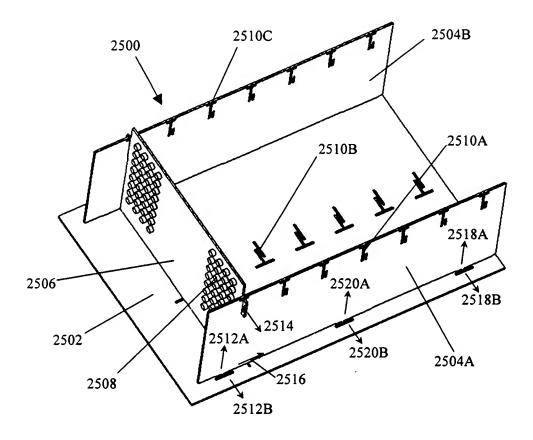
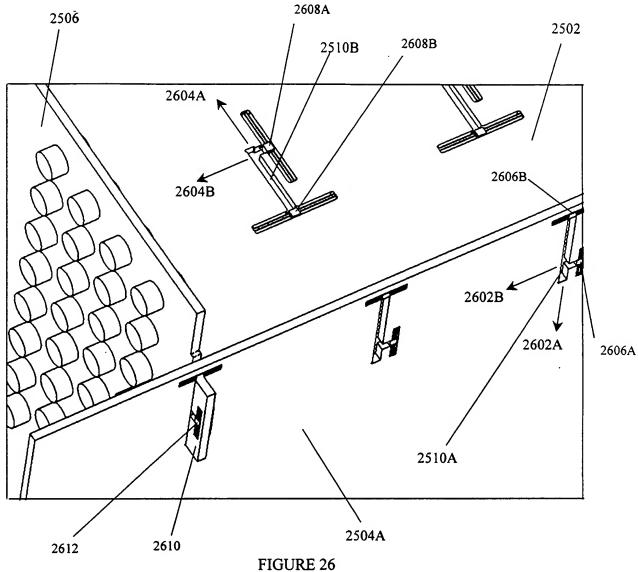


FIGURE 25

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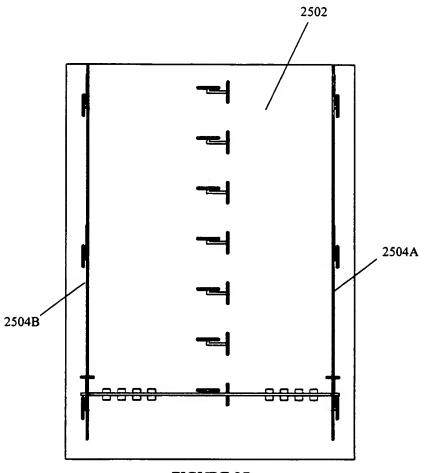


FIGURE 27



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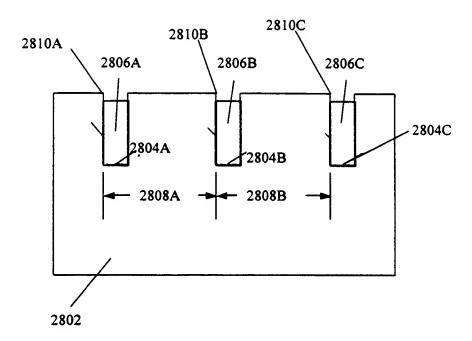


FIGURE 28



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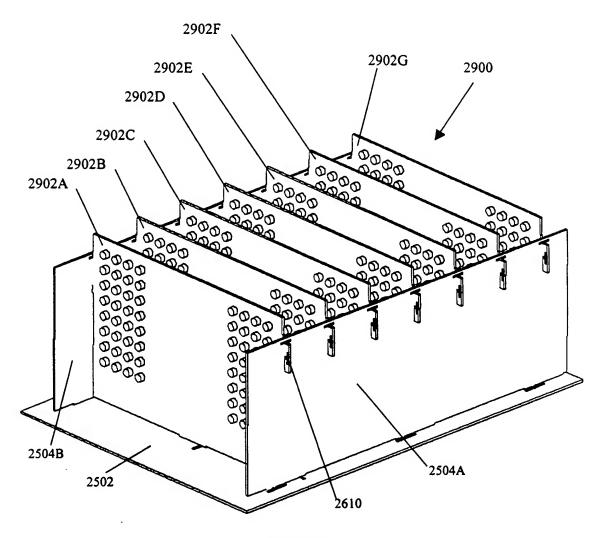


FIGURE 29



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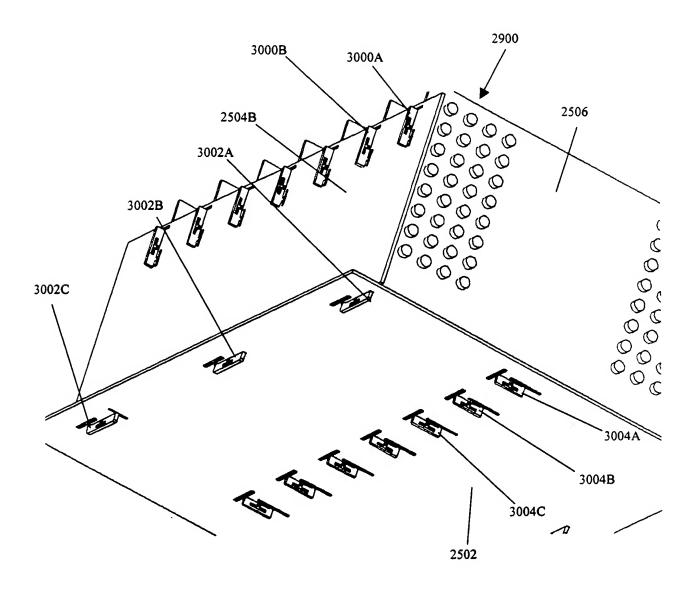


FIGURE 30



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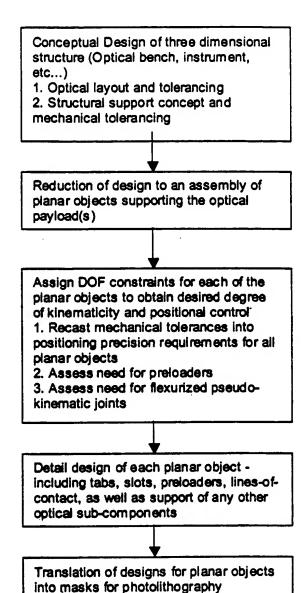


FIGURE 31



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METHODS OF MAKING THE SAME

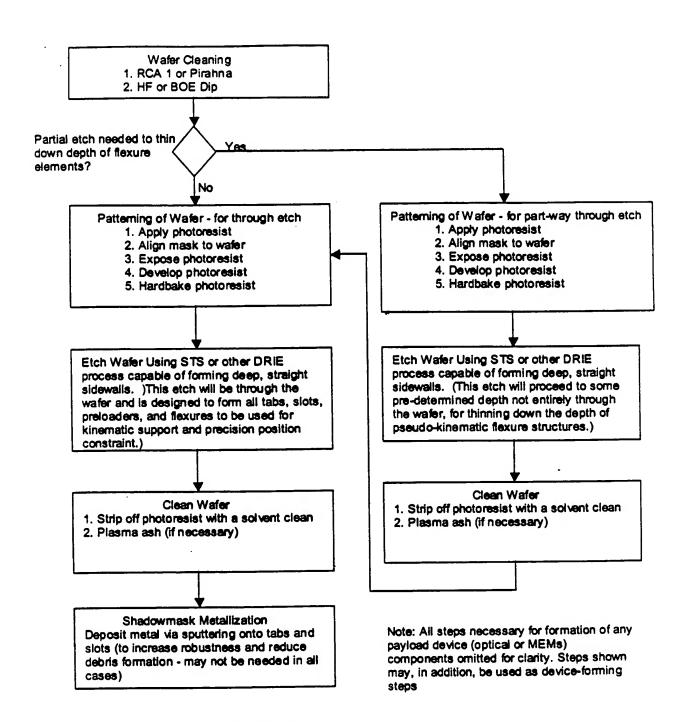


FIGURE 32

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## Set-up for Assembly

- 1. Assemble any separate optical components to the various planar parts
- 2. Choose a part as the "base" to assemble other planar parts to
- 3. Create jigs and fixtures as needed to aid assembly (should not be necessary these structures should be "self-jigging")

Assemble first planar part to Base

- 1. Engage mating features (tab/slot, edge/surface, surface/surface ...)
- 2. Temporarily support part in any DOF not yet adequately constrained
- 3. Insert any preloader pins desired at this stage

Repeat for all subsequent planar parts

- 1. Engage mating features to base and other parts in order necessary for overall engagement
- 2. Temporary support if necessary
- 3. Insert any preloader pins desired at this stage

Final Assembly

- 1. Insert remainder of preloader pins
- 2. Apply external preloads if necessary (via weights, pneumatics, etc)
- 3. Apply adhesive to joints if deemed necessary
- 4. Cure glue

Note: A bottom-to-top topology is assumed here (as in Figure 1: a base, 3 connecting elements (bipods), and a payload). If the topology is more complex (such as a ring), a more complex assembly procedure is required, possibly also requiring jigs/fixtures.

FIGURE 33